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method of the present invention, the substrate was in touch with a microwave plasma ball generated inside a cylindrical microwave cavity. The reactor chamber pressure generally is maintained between 1 mtorr and 250 torr. The substrate of about 25mm x 25mm was heated by the plasma to about 200°C -1600°C. Diamond is deposited at a rate of 0.05-20 μm per hour depending on the composition of the solution, the vapor pressure, the substrate temperature, and the plasma power density.

On page 11, starting at line 14, please delete the paragraph and insert in place thereof the following:

When the precursor 5 comprises a solution of methanol and a proper quantity of one or more carbon containing compounds having a carbon to oxygen ratio greater than one, diamond growth is substantially uniform, reproducible, and at a higher growth rate than conventional CVD methods. For example, ethanol ($\text{CH}_3\text{CH}_2\text{OH}$), isopropanol, $((\text{CH}_3)_2\text{CHOH})$, and acetone (CH_3COCH_3) have respective carbon to oxygen ratios of 2, 3, and 3. The selection of the carbon containing compound is not limited to ethanol, isopropanol, or acetone, and may be selected from other such carbon containing compounds having carbon to oxygen ratios greater than one. In addition, as indicated in Example 8 below, under certain CVD conditions, it is not required for the precursor 5 to contain methanol. However, if the precursor comprises only a carbon containing compound having carbon to oxygen ratios greater than one, suppression of the formation of non-diamond phases can generally be maintained by lowering the substrate temperature to below about 900° C and/or selectively nucleating the substrate with high quality diamond particles. Also, diamond growth is as well a function of the plasma density, reaction chamber pressure, carbon to oxygen ratio at the substrate surface, and precursor flow rate, and

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these functions must be monitored and adjusted accordingly to promote diamond growth. Further, if it is desired for the diamond to contain a dopant, the carbon containing compound can comprise dopant elements or moieties in addition to C, O, and H, such as boron, phosphorus, silicon, etc. Such dopants include, but are not limited to, halides, metals, and the like. Still further, carrier gasses, such as argon, hydrogen, and the like may be utilized to increase the precursor flow rate into or through the reaction chamber 1.

On page 13, starting at line 16, please delete the paragraph and insert in place thereof the following:

In contrast to what was reported by *Buck*, who deposited clusters of diamond crystallites in a small area of 3-4 mm² in a methanol plasma, when methanol was used alone as the precursor feedstock for substrates of 25 mm x 25 mm in size or larger, only the area near the edge showed acceptable diamond nucleation density in some cases. The diamond deposition was highly non-uniform across the substrate surface. In other cases, too much oxidizing and carbon etching radicals were generated in the methanol plasma resulting in a very slow growth of diamond. For example, when 2,000 W microwave was applied at a pressure of 80 torr and a substrate temperature of 900° C, the methanol plasma deposited only about 2 μm diamond on a molybdenum substrate after 40 hours of deposition. The diamond growth rate is only 0.05 μm per hour in this case. Using a solution comprising of methanol and one or more carbon containing compounds, that have a carbon to oxygen ratio being greater than one, diamond deposition rates of more than two orders of magnitude greater than some conventional methods have been achieved in the present invention.